
EGI.eu and EGI-InSPIRE Memorandum of Understanding Annual Report 2011-2012

One of the main goals of EGI.eu is to bring European distributed computing initiatives into an integrated e-Infrastructure that is able to seamlessly peer with equivalent e-Infrastructures around the world. This ambitious aim requires the close support of external partners, outside the EGI community, which are equally committed to the development of e-Infrastructures. For the sustainable operation of EGI, it is crucial to interact with technology and infrastructure providers, as well as with our user communities to drive the evolution of our services.

To nurture such collaborations, EGI needs to establish and formalise agreements with relevant partners on the European and global level. Each external collaboration is thus formalised via a Memorandum of Understanding (MoU), which is a signed document written to confirm and define the framework of collaboration between EGI.eu or EGI-InSPIRE and individual collaborating organisations or activities. EGI recognises MoUs as critical tools towards opening wide, long-term activities and cooperation.

This report offers an overview of the variety of MoUs that have been signed since the set up of EGI.eu in 2010 and the key activities that have taken place and results achieved. It also serves as an opportunity to monitor the progress of the individual milestones within the agreements and evaluate strategic impact moving forward.

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Executive Summary

One of the main goals of EGI.eu is to bring European distributed computing initiatives into an integrated e-Infrastructure that is able to seamlessly peer with equivalent e-Infrastructures around the world. To nurture such collaborations, EGI needs to establish and formalise agreements with relevant partners on the European and global level, namely with Resource Infrastructure Providers, Technology Providers, Virtual Research Communities and other projects and organisations. Each external collaboration is formalised via a Memorandum of Understanding (MoU), which is a signed document defining a collaboration framework between EGI.eu or EGI-InSPIRE and the collaborating organisations or activities.

This report therefore offers an overview of the variety of MoUs that have been signed since the set up of EGI.eu in 2010 and the key activities that have taken place and results achieved over the last years, which are broken down into managerial, technical and strategic impact.

EGI is a federation of cooperating resource infrastructure providers, working together to provide world-class computing services needed by European researchers. The core resource providers fall into two categories: National Grid Initiatives (NGIs) and European Intergovernmental Research Organisations (EIROs). However, EGI also integrates computing resources provided by international organisations. Strong relationships exist already in a variety of regions such as with the eight countries in the Asia-Pacific region as partners within the EGI-InSPIRE project and the Open Science Grid (OSG) in North America. During the last year, 3 resource providers have signed an MoU with EGI.eu in order to integrate their infrastructure with EGI: Ukraine, Latin America and South Africa. Both Ukraine and LA have been integrated with EGI. Regarding Latin America, the end of the GISELA supporting project may impair the continuity of the operational services provided by Iniciativa de Grid de America Latina - Caribe (IGALC). Both operational teams are in close contact and plans are being developed in preparation. The cooperation with South Africa started well but was subsequently impaired by a lack of human and IT resources able to be provided by the MoU partners, which are necessary to complete the integration process. However, the interest in completing the certification and integration procedure was reassessed in April 2012 and the MoU partners confirmed their interest in completing it. .

On the technology front, as EGI does not develop the software deployed in the grid infrastructure, all upgrades and new programmes are produced elsewhere, by independent technology providers (TPs). The technology is managed by the Technical Collaboration Board (TCB), a group within EGI.eu that identifies appropriate TPs to develop the required piece of software and established a relationship with the provider through an MoU and Service Level Agreements (SLAs). EGI.eu has signed a total of 4 MoUs with technology providers: European Middleware Initiative (EMI), Initiative for Globus in Europe (IGE), Simple API for Grid Applications (SAGA) and StratusLab while one more MoU with the University of Virginia (UVACSE) is being finalised. An SLA has also been established with 3 (SAGA, IGE, EMI). All signed agreements have progressed well with improved service delivery. Specific user communities are formalised through the Virtual Research Community (VRC) structure. VRCs are self-organised research communities, which give individuals within their community a clear mandate to represent the interests within the EGI ecosystem. EGI.eu has signed agreements with 4 VRCs covering Hydro-Meteorology (HMRC), Life-Science (LSGC), Structural Biology (WeNMR) and High-Energy Physics (WLCG). 3 of the VRCs have been active within the EGI User Community Board

collecting and prioritising requirements that feed into the TCB and in EGI major events. Only the issues have been with HMRC, where activities stalled upon announcement of the MoU. HMRC representatives shifted their first-year priorities to the set up of the DRIHMS project, which delayed all activities and milestones. Even though representatives have been active within the EGI major events, they have not yet attended a UCB meeting or have completed any milestones. The project coordinator has communicated their plans to pick back up the activities over the next year starting from the EGI Technical Forum 2012 and to work with the EGI Technical Outreach to New Communities Team.

Finally, the European Commission has invested in a number of projects within the e-Infrastructure domain. To support EGI in communicating results or coordination across the DCIs, it is essential that EGI identify areas of collaboration opportunities with these projects. 12 agreements have been established in this area covering a wide range of issues. The strategic impact varies, but the majority of MoUs have led to targeted activities that have served both parties.

This report concludes with a snapshot look at the defined milestone statistics (delivered, late and upcoming). A final table outlines the MoUs that are in progress or planned for the coming year. A summary of the lessons learnt, issues that have arisen and the next steps for the coming year is also provided as a conclusion.

1. Technology Providers

The European Grid Infrastructure (EGI) is a federation of resource providers set up to deliver sustainable, integrated and secure computing services to European researchers and their international partners.

EGI does not develop the software deployed in the grid infrastructure – all upgrades and new programmes are produced elsewhere, by independent technology providers. The outsourcing of technology developments is managed by EGI.eu, the organisation established to coordinate the infrastructure on behalf of its participants.

The Technical Collaboration Board (TCB), a group within EGI.eu, manages this process. They identify appropriate technology providers to develop the required piece of software and established a business relationship with the provider through a Memorandum of Understanding (MoU) and Service Level Agreements (SLAs).

The following section outlines the four technology providers with which EGI is currently collaborating.

1.1. EMI

MoU Partners	EGI.eu	EMI-European Middleware Initiative
MoU Type	Technology Provider	
Start date	27/01/2011	
End date	30/04/2013	
Partner contact	EMI Project Office (emi-po@cern.ch)	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-emi	

Motivation for the MoU

EMI is a collaboration of four major European middleware providers: ARC, dCache, gLite and UNICORE. The initiative aims to deliver a consolidated set of middleware components for deployment in EGI, as part of the Unified Middleware Distribution (UMD). EGI and EMI work together to enable the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work. In this broad context, the specific goals of the collaborations are:

- Provide robust, well-designed, user-centric services to scientific user communities.
- Define and monitor SLA for third-level support on incidents and requests.
- Accelerate the development of standards within production grid infrastructures.
- Disseminate the results of this collaboration within the remit of each project's dissemination and communication activities such as joint events.
- Exchange ideas and collaborate on the definition of sustainability models.
- Collaborate in business relationships development.

Assessment

Managerial

So far, progress on milestones is relatively good with all milestones having been delivered according to the timeline and reporting. EMI has been a main technology provider member within the TCB providing insight, expertise, requirements and feedback on progress. EMI management has contributed to a number of EGI events as program committee members. There have been two joint EGI-EMI major events since the launch of the projects in 2010. EMI members have heavily participated in each of EGI's major events with presentations and workshops.

Technical

The main milestones achieved are:

- Signed SLA.
- Listing of the standards relevant to both projects and a roadmap for their delivery to be used as input to the EGI-InSPIRE Standards Roadmap.
- Input to the UMD Roadmap.
- Defined strategy for managing software releases and repositories.
- Inventory of the existing software components to provide an initial assessment of usage and install base and opportunities for uptake and support outside of the EGI community.
- Defined strategy for service monitoring and management.
- Analysed joint sustainability strategies for the EMI middleware and EGI.
- Described the role of each actor in service delivery and service provision to users.
- Described the strategy for accounting setup and operations including the identification of services, which may need extensions to accounting mechanisms to record service usage.
- Described the implementation of the extensions to the accounting mechanisms as identified above.

Strategic

The EMI project supported the transition of the main technology being used in EGI from monolithic releases to independent components managed by their product teams and with processes aligned with the open source communities (e.g., releasing on the EPEL repository). Processes for software support and tools to track the requests to the product teams have been established together with the tool for SLA monitoring and reporting.

1.2. IGE

MoU Partners	EGI.eu	Initiative for Globus in Europe (IGE)
MoU Type	Technology Provider	
Start date	20/01/2011	
End date	31/01/2014	
Partner contact	IGE: Stephen Crouch, s.crouch@software.ac.uk	

Report date	May 2012
Milestones	http://go.egi.eu/mou-milestones-ige

Motivation for the MoU

The specific goals of the collaborations are to:

- Provide robust, well-designed, user-centric services to scientific user communities.
- Define and monitor SLA for third-level support on incidents and requests.
- Accelerate the development of standards within production grid infrastructures.
- Disseminate the results of this collaboration within the remit of each project's dissemination and communication activities such as joint events.
- Exchange ideas and collaborate on the definition of sustainability models.
- Collaborate in business relationships development.

Assessment

Managerial

So far, progress on milestones is relatively good with all milestones having been delivered according to the timeline and reporting. As with EMI, IGE has been a main technology provider member within the TCB providing insight, expertise, requirements and feedback on progress with regards to Globus implementations within EGI. They have also heavily participated in each of EGI's major events with presentations and workshops.

Technical

After initial advertisement of the collaboration, IGE provided a report listing the inputs to the UMD Roadmap. EGI.eu provided a report with the inventory of existing software components as an initial assessment of usage and install base and opportunities for uptake and support outside of the EGI community. Following this, an SLA between IGE and EGI.eu was signed. For the second consecutive year, IGE provided a report listing the inputs to the UMD Roadmap, while EGI.eu provided a report listing the standards relevant to both projects, a roadmap for their delivery to be used as input to the Standards Roadmap and a report on dissemination activities. They have also taken part in the EGI Accounting Task Force where they provided requirements for extensions to their accounting mechanisms in order to record service usage, which included a release schedule as well.

Strategic

Various Globus services were integrated in Finland, Germany, and Spain. In PY3, wider deployment of Globus is expected in Germany and United Kingdom. Globus operations integration is still in progress. Regarding accounting, IGE partners are contributing to the TCB accounting task force to ensure that Grid-SAFE will be capable of publishing accounting records in the central EGI accounting database.

Globus components are well defined in their scope, and role within the architecture of the Globus middleware. Verification and Staged Rollout duties for Globus components do not require much effort, and software quality generally meets the defined and applicable Quality Criteria. In addition,

issues with several components lacking quality in documentation that were recorded in the verification reports and communicated in comparative performance reviews were ultimately corrected.

1.3. SAGA

MoU Partners	EGI.eu	The SAGA project (Simple API for Grid Applications)
MoU Type	Technology Provider	
Start date	11/04/2011	
End date	30/04/2013	
Partner contact	SAGA: Shantenu Jha, sjha@cct.lsu.edu	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-saga	

Motivation for the MoU

The specific goals of the collaborations are to:

- Provide robust, well-designed, user-centric services to scientific user communities.
- Define and monitor SLA for third-level support on incidents and requests.
- Accelerate the development of standards within production grid infrastructures.
- Disseminate the results of this collaboration within the remit of each project's dissemination and communication activities such as joint events.
- Exchange ideas and collaborate on the definition of sustainability models.
- Collaborate in business relationships development.

Assessment

Managerial

So far, progress on milestones is relatively good with seven milestones delivered. At the time of reporting, only two milestones are late. The late milestones regard M5.1 'Evaluating the user base of SAGA'. In general, this is not a task that can be performed automatically as the contributed software is a set of libraries that are typically deployed at the application level or in portal applications and not stand-alone services. SAGA provided some information on the community using SAGA and these are being contacted by EGI.eu to better understand the usage. More work will be performed over the summer period; therefore, this milestone is expected to be closed by the end of August 2012. As for M5.2, SAGA provided the core ideas behind the sustainability strategy. A more detailed document will be developed in the coming months.

Technical

After initial advertisement of the collaboration, an SLA between SAGA and EGI.eu was signed. SAGA provided a report listing the inputs to the UMD Roadmap. Following this, EGI.eu provided a report

listing the standards relevant to both projects, a roadmap for their delivery to be used as input to the Standards Roadmap and a report on dissemination activities.

Strategic

The SAGA project was included in the TCB as a response to the need of implementing a consistent Client API as recorded in the UMD capabilities documentation¹. The SAGA project plays a dual role in that it is stewarding the SAGA API family of standards through OGF, but also provides multiple programming language bindings and associated plugins for gLite, UNICORE, ARC and Globus. These plugins are considered reference implementations for the SAGA standards. In the context of EGI, it was agreed that the relevant other Technology Providers would take over the maintenance for the provided plugins in close coordination and consultancy with the SAGA project. Therefore, these plugins will be delivered by EMI (for gLite, UNICORE and ARC) and IGE (for Globus) rather than the SAGA Project.

Due to the architecture of the reference implementation and its plugins, the SAGA Project rather acts more as a consultant to other Technology Providers than a full-fledged Technology Provider. Depending on how well research communities accept and integrate with the SAGA API this situation may change.

1.4. StratusLab

MoU Partners	EGI.eu	StratusLab
MoU Type	Technology Provider	
Start date	11/04/2011	
End date	30/04/2012	
Partner contact	StratusLab: David O'Callaghan, david.ocallaghan@cs.tcd.ie	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-stratuslab	

Motivation for the MoU

EGI and StratusLab will work together to enable the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work. Specifically, this is done through:

- Workshops and technical meetings to coordinate adoption of cloud computing in Distributed Computing Infrastructures.
- Complementary training strategies focusing on cloud middleware installation, configuration and usage by resource providers to support their end users.
- The development of standards identified in the EGI Standards Roadmap and in the StratusLab Plans for Standardization Activities.

¹ https://wiki.egi.eu/wiki/EGI_Roadmap_and_Technology#Client_API

- The development of cloud middleware components based on requirements gathered through EGI-InSPIRE and StratusLab within the various scientific communities within EGI and expressed through the EGI Technology and UMD Roadmaps.

Assessment

Managerial

This collaboration and its milestones progressed well with all but one milestone being completed at the conclusion of the agreement. The open milestone was around the establishment of an agreement for delivery of StratusLab software for UMD. However, the StratusLab project ended prior to the deployment of EGI Cloud services. The deployment of software components for clouds in EGI has started in the framework of the EGI Federated Cloud task force and the related testbed. The inclusion of cloud-related software components in UMD will be considered in the future.

In terms of the overall collaboration, StratusLab has been a main member from a technology provider perspective within the TCB providing insight, expertise, requirements and feedback on progress. They have also heavily participated in each of EGI's major events with presentations, workshops and training courses. Pending the availability of financial resources, StratusLab may participate in the EGI Technical Forum in Prague (Sept 2012), to present its final exploitation and sustainability plan.

Technical

The main milestones achieved are:

- User Training session at EGI User Forum 2011.
- Technical meeting at EGI User Virtualisation Workshop.
- Definition of prioritised list of standards.
- Description of software components support standards-based interfaces to be released by StratusLab.
- Technical meeting on grid-cloud integration at EGI TF 2011.
- Trainer training session at EGI TF 2011.
- Report on dissemination activities.
- Technical meeting on grid-cloud integration at EGI UF 2012.
- User Training session at EGI User Forum 2012.
- Explored joint sustainability strategies for StratusLab middleware and EGI.
- Deployed standards-based StratusLab software components at EGI sites through resource centres participating in the EGI Federated Cloud Task Force activity and test bed.
- EGI SA2 Activity deployed a StratusLab Marketplace instance to store middleware appliances metadata and to support the EGI Federated Cloud Task Force activities.

Strategic

The main contribution of the StratusLab project has been to develop key software components to develop a cloud infrastructure. The community could learn new skills through participating into the various training events. The result of the work is being reused by the EGI Federated Cloud Task Force.

2. Resource Infrastructure Providers

EGI is a federation of cooperating resource infrastructure providers, working together provide the leading edge computing services needed by European researchers. Together with the research communities that benefit from the federated infrastructure, resource providers are EGI's main stakeholders. The core EGI resource providers fall into one of the following two categories: National Grid Initiatives (NGIs) and European Intergovernmental Research Organisations (EIROs).

However, EGI also integrates computing resources provided by international organisations, through Memoranda of Understanding. Strong relationships exist already in a variety of regions such as with the eight countries in the Asia-Pacific region as partners within the EGI-InSPIRE project and the Open Science Grid in North America. Below are three resource infrastructure providers that have signed an MoU with EGI.eu in order to help facilitate the process of integrating their infrastructure with EGI, namely in Ukraine, Latin America and South Africa.

2.1. BBC / Ukraine

MoU Partners	EGI.eu	Basic Coordination Centre (BCC) – Ukraine National Grid (UNG)
MoU Type	Resource Infrastructure Provider	
Start date	22/12/2011	
End date		
Partner contact	BBC: Sergiy Svistunov, svistunov@bitp.kiev.ua	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-bcc	

Motivation for the MoU

The specific goals of the collaboration are to:

1. Enhance the capacities of both infrastructures.
2. Provide Local and Global operational services as needed to support the international user community and the EGI operational needs.
3. Subscribe to a mandatory set of policies, procedures and OLAs.
4. Comply with the operations interfaces required by the EGI Operations Architecture, which are needed to ensure seamless and interoperable access to resources.
5. Participate in the Operations Management Board in order to contribute to the EGI operations agenda.
6. Participate in the Security Policy Team in order to contribute to the development of the security policies fabric of the infrastructure.

Assessment

Managerial

The cooperation has been progressing very well and culminated with the certification the Ukrainian NGI. Cooperation will continue by ensure participation of Ukrainian representatives into the EGI Operations Management Board.

Technical

The Ukrainian NGI was certified as part of the production infrastructure in June 2012.

Strategic

The creation of an Ukrainian NGI and its integration within NGI allows for the replacement of the Russian federated Operations Centre with a set of independent national Resource Providers. In addition, its integration will allow for a more extensive adoption of the ARC middleware stack.

2.2. MERAKA / South Africa

MoU Partners	EGI.eu	CSIR Meraka Institute – South African National Grid (SAGrid)
MoU Type	Resource Infrastructure Provider	
Start date	14/10/2011	
End date		
Partner contact	SAGrid: Bruce Becker, BBecker@csir.co.za	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-meraka	

Motivation for the MoU

The specific goals of the collaboration are to:

1. Enhance the capacities of both infrastructures.
2. Provide Local and Global operational services as needed to support the international user community and the EGI operational needs.
3. Subscribe to a mandatory set of policies, procedures and OLAs.
4. Comply with the operations interfaces required by the EGI Operations Architecture, which are needed to ensure seamless and interoperable access to resources.
5. Participate in the Operations Management Board to contribute to the EGI operations agenda.
6. Participate in the Security Policy Team to contribute to the development of the security policies fabric of the infrastructure.

Assessment

Managerial

The cooperation started well but was subsequently impaired by a lack of human and IT resources able to be provided by the MoU partners, which are necessary to complete the integration process. However, the interest in completing the certification and integration procedure was reassessed in April 2012 and the MoU partners confirmed their interest in completing it.

Technical

The certification of the South African Grid Initiative started in August 2011 but was kept on hold until April 2012 because of lack of human and IT resources to complete it.

Strategic

The integration of the South Africa Grid Initiative is necessary to allow for support of the ATLAS VO in that region. Two resource centres are already running production services and their integration is needed to ensure support, service level management, accounting of usage and for the integration into the VO-specific operations framework.

2.3. UFRJ / Latin America

MoU Partners	EGI.eu	Universidade Federal do Rio de Janeiro (UFRJ)
MoU Type	Resource Infrastructure Provider	
Start date	11/04/2011	
End date		
Partner contact	UFRJ: Bernard Marechal, marechal@if.ufrj.br	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-ufrj	

Motivation for the MoU

The specific goals of the collaboration are to:

1. Enhance the capacities of both infrastructures.
2. Provide Local and Global operational services as needed to support the international user community and the EGI operational needs.
3. Subscribe to a mandatory set of policies, procedures and OLAs.
4. Comply with the operations interfaces required by the EGI Operations Architecture, which are needed to ensure seamless and interoperable access to resources.
5. Participate in the Operations Management Board to contribute to the EGI operations agenda.

Assessment

Managerial

The cooperation has progressed well and the IGAL Operations Manager actively contributes to the works of the Operations Management Board. The end of the GISELA supporting project may however impair the continuity of the operational services provided by IGALC. Both operational teams are in close contact and plans are being developed in preparation. Sustainability of these partly depends on the sustainability plans of HTC support in the Latin American and Caribbean region.

Technical

The IGAL Resource Centres were already fully integrated into EGI as they belonged to a former EGEE federated operations centre. IGAL and EGI have been collaborating on daily operational matters and IGAL representatives regularly participated to EGI conferences.

Strategic

Integration of South American Resource Centres is strategic to support various international research collaborations.

3. Virtual Research Communities

Virtual research communities (VRCs) are groups of like-minded individuals organised by discipline or computational model. VRCs typically have an established presence in their field (for example an ESFRI project, EIROForum laboratory or national research structure) and represent a well-defined scientific or research community.

VRCs are self-organised research communities, which give individuals within their community a clear mandate to represent the interests of their research field within the EGI ecosystem. They can include one or more virtual organisations and act as the main communication channel between the researchers they represent and EGI.

EGI establishes partnerships with individual VRCs through a Memorandum of Understanding (MoU). Following the accreditation process and final agreement, VRCs can access the computing resources and data storage provided by the EGI community through open source software solutions. VRC members can store, process and index large datasets and can interact with partners using the secured services of EGI's production infrastructure.

3.1. HMRC

MoU Partners	EGI.eu	HMRC - Hydro-Meteorology Research Community
MoU Type	VRC	
Start date	22/08/2011	
End date		
Partner contact	HMRC: Antonio Parodi, antonio.parodi@cimafoundation.org	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-hmrc	

Motivation for the MoU

HMRC deals with problems involving the hydrologic cycle, the water budget, and the rainfall statistics of storms. The boundaries of hydrometeorology are not clear-cut, and the problems of the hydrometeorologist overlap with those of the climatologist, the hydrologist, the cloud physicist, and the weather forecaster. Considerable emphasis has been placed on determining, theoretically or empirically, the relationships between meteorological variables and the maximum precipitation reaching the ground. Other concerns of hydrometeorologists include the determination of rainfall probabilities, the space and time distribution of rainfall and evaporation, the recurrence interval of major storms, snow melt and runoff, and probable wind tides and waves in reservoirs. The whole field of water quality and supply is of growing importance in hydrometeorology.

CIMA Foundation, the MoU signatory, has been playing a central role in the hydrometeorology research community and as coordinator of dedicated projects in the domain, is well positioned to represent the overall hydrometeorology community and coordinate the HMRC VRC.

The specific joint workplan signed with EGI.eu covers:

- User support

- Services and operations
- Requirements gathering
- Dissemination

Assessment

Managerial

This MoU stalled from the beginning. Upon announcement of the MoU from both parties, HMRC representatives have been invited to attend several UCB meetings, but have not done so to date. Several follow ups were made, but HMRC's response was to postpone till after the heavy proposal period, then to discuss at internal project meetings, with no updates ever provided. HMRC has been specifically invited to the latest UCB meeting, but with no attendance. Another update was sent via email for this report with a response several weeks later to be provided by the 3rd week of June. The project coordinator has communicated their plans to pick back up the activities over the next year starting from the EGI Technical Forum 2012.

Technical

Two activities have been carried out. The first was the initial announcement of the MoU, while the second was a presentation given by DRIHMS project coordinator and MoU contact Antonio Parodi at the EGI Community Forum in Munich². Face to face meetings were also held at the Community Forum in Munich where the two projects had adjacent booths and an agreement was reached for the technical activities that would be needed to take things forward. In terms of dissemination of the relationship both projects shared the stage at the EGU General Assembly session 'Earth science on Cloud, HPC and Grid' and where able to link the activities.

Strategic

Progress has been slow with this community although communication has continued. The representative has reported that the project took most of its first year to get off the ground. DRIHM will work with the EGI's Technical Outreach to New Communities Team to develop solutions for this community.

3.2. LSGC

MoU Partners	EGI.eu	LSGC - Life-Science Grid Community
MoU Type	VRC	
Start date	27/05/2011	
End date		
Partner contact	LSGC: Tristan Glatard, glatard@creatis.insa-lyon.fr	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-lsgc	

² http://www.drihms.eu/publications/material/DRIHM_presentation_EGI_2012_Munich.pdf

Motivation for the MoU

The LSGC serves the worldwide healthcare and life sciences community in its adoption and exploitation of distributed computing infrastructures. The life science community covers scientific domains such as bioinformatics, genomics, biobanking, medical imaging, statistical analysis, and systems biology. EGI and the LSGC work together to support the developments throughout the life science community focusing on:

- User support
- Services and operations
- User community policy and procedures
- Requirements gathering
- Dissemination

Assessment

Managerial

This MoU is working very well with high-level of participation and interaction. LSGC has been a main stay within the UCB providing insight, expertise, requirements and feedback on progress. They have provided organisational information to other potential VRCs (e.g. astrophysics) and have heavily participated in each of EGI's major events with presentations and workshops. Overall, LSGC alongside WeNMR are the exemplar VRCs for what others should become.

The only open milestone to-date is a summary of the main achievements, open issues and future plans related to the collaboration to be done by Steve Brewer, which can be accomplished through updating this document.

Technical

LSGC representatives have taken part in almost a dozen UCB meetings and have actively participated in EGI major events. According to specific milestones, the main activities are around:

- Participation in UCB.
- Outlining areas of expertise.
- Providing application services that can be offered and those that are needed.
- Feedback on progress on requirements.

Communication takes place through the periodic UCB meetings, but technical work and requirement submissions is done through the online Requirements Tracker tool (RT).

Strategic

LSGC remains a big success story for EGI, the self-organised community group continues to thrive and interact with EGI. Overall usage of the infrastructure by users relating to this community has risen over the year. Their representatives including from the technical teams have participated in UCB meetings and also EGI Forum sessions and discussions. All of these interactions have incorporated more technical discussions as the LSGC team gain awareness of their communities' needs and challenges. Many bugs and recommendations have been received and processed over the course of the year. The VRC suffered a blow in the loss of HealthGrid as their underpinning

organisation but have managed to continue. This caused a blip in terms of some of the administration but the dialogue and productivity continued. The outlook continues to be promising for the 3rd year of the project and the model developed by LSGC remains a compelling one for research communities of similar characteristics.

3.3. WeNMR

MoU Partners	EGI.eu	WeNMR - A worldwide e-Infrastructure for NMR and structural biology
MoU Type	VRC	
Start date	11/04/2011	
End date		
Partner contact	WeNMR: Alexandre Bonvin, a.m.j.j.bonvin@uu.nl	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-wenmr	

Motivation for the MoU

WeNMR brings together research teams in the structural biology and life science area into a virtual research community at a worldwide level, focusing on biomolecular Nuclear Magnetic Resonance (NMR) and Small Angle X-ray Scattering (SAXS). These research communities need virtual platforms to provide user-friendly computation tools supported by an underlying high performance e-Infrastructure. The main objective of WeNMR is to establish an e-Infrastructure-based global virtual research community for structural biology in the life sciences.

EGI and the WeNMR will work together to support the development of an emerging VRC in the area of structural biology and life sciences. The collaboration will focus on:

- User support
- Application integration
- User Community policy and procedures
- Requirements gathering
- Sustainability
- Dissemination

Assessment

Managerial

Similar to LSGC, this MoU is working very well with high-level of participation and interaction. WeNMR has been a main stay within the UCB providing insight, expertise, requirements and feedback on progress. They have heavily participated in each of EGI's major events with presentations and workshops. Overall, WeNMR, through Alexandre Bonvin, is an exemplar VRC for what others should become. All milestones have been delivered with no open issues.

Technical

The main milestones achieved are:

- Announcement and publication of the collaboration agreement.
- Feedback from EGI on progress on requirements progress.
- Participation in UCB.
- Outline VRC’s areas of expertise.
- Help desk integration (VRC & EGI).
- List of applications and services needed by the VRC.
- List of applications and services that the VRC can offer.
- VRC sustainability plan – description of the WeNMR Sustainability work package.
- Updated and prioritised requirements for the community.
- Summary report of the main achievements, open issues and future plans.

Alexandre Bovin has also given a keynote presentation at the last EGI Community Forum in Munich. WeNMR was also the first “stories from the grid” video presentation³.

Strategic

WeNMR also remains a strong partnership with EGI. The VRC contributes regularly with EGI in terms of UCB, the Forums and other activities. They are enthusiastic partners in the Federated Cloud Task Force too. The communication links defined by the MoU have also played their part in resolving technical glitches that occurred at one point during the year. These were resolved and quickly overcome. EGI was also able to support the involvement of WeNMR with the INSTRUCT ESFRI project, which is also concerned with Structural Biology. The UK NGI was able to participate in a UK meeting on behalf of EGI and act as a liaison with the team from STFC in the UK who are developing applications in this area. This too is a good role model for how smaller VRCs can pave the way for broader interaction with ESFRIs as it enables EGI to get to know the community and learn about its methods and processes.

3.4. WLCG

MoU Partners	EGI.eu	Worldwide LHC Computing Grid (WLCG)
MoU Type	VRC	
Start date	24/01/2012	
End date		
Partner contact	WLCG: Ian Bird, Ian.Bird@cern.ch	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-wlcg	

³ <http://www.egi.eu/news-and-media/videos/index.html>

Motivation for the MoU

The Worldwide LHC Computing Grid (WLCG) is a distributed computing infrastructure that provides the production and analysis environments for the LHC experiments. It is managed and operated by a worldwide collaboration between the experiments and the participating computer centres. The resources are distributed across the world for funding and sociological reasons. Our task is to make use of the resources available to us – no matter where they are located. We know it would be simpler to put all the resources in one or two large centres, however this is not currently an option.

WLCG is therefore a distributed, or grid-based, infrastructure - the most effective solution for meeting the data analysis challenge on this unprecedented scale. Currently WLCG is made up of more than 140 computing centres in 34 countries to process, analyse and store data produced from the LHC, making it equally available to all partners, regardless of their physical location.

The WLCG is now the world's largest computing grid. It is based on the two main global grids currently in operation, as well as many associated regional and national grids across the world.

The goal of the collaboration defined by the MoU is to establish a formal relationship between EGI.eu and WLCG in order to benefit the European wide federation of VRCs through:

- User Support
- Services and Operations
- User Community Policy and Procedures
- Requirements gathering
- Dissemination

Assessment

Managerial

Clearly, WLCG is a well-established community and it is also well embedded into EGI both in terms of the infrastructure and the project. However, due to the complexity of this large global community, agreeing an MoU took much longer than anticipated. Finally, this was achieved during the course of this year and completed the picture of EGI's interaction with this significant Heavy User Community.

Technical

From a community perspective, the main interaction has been through the many sessions undertaken during the forums. From a requirements point of view, WLCG representatives have taken part in number UCB meetings.

Strategic

The MoU represents a new step in the relationship between EGI and its largest user community, aimed at building a collaboration that will bring significant benefits to the High Energy Physics scientific community. This agreement with EGI was very important to the long-term sustainability of WLCG and the services WLCG is providing to the HEP community and ensures that both continue to exploit the expertise and resources available for the benefit of all researchers.

4. Other Projects

The European Commission has invested in a number of projects within the e-Infrastructure domain. To support EGI in communicating results or coordination across the DCIs, it is essential that EGI identify areas of collaboration opportunities with coordination and support projects. A number of agreements have been established to-date with these projects, which are covered in the following sections.

4.1. CHAIN

MoU Partners	EGI-InSPIRE	CHAIN – Co-ordination & Harmonisation of Advanced e-Infrastructures
MoU Type	Project	
Start date	11/07/2011	
End date	30/11/2012	
Partner contact	CHAIN: Ludek Matyska, ludek@ics.muni.cz	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-chain	

Motivation for the MoU

EGI-InSPIRE and the CHAIN project collaborate in the following areas:

- Interoperations and integration of regional grid infrastructures
- Interoperation of operational tools
- Adopt open standards for grid resources
- Dissemination
- Training
- Virtual Research Community co-ordination
- Knowledge exchange with NGIs

Assessment

Managerial

So far, progress on milestones is good. Nine milestones were delivered. A CHAIN-EGI Workshop on Interoperability and Interoperation was held on 27 January 2012 where the milestone progress was clarified. At the time of reporting, two milestones are late, which relate to documenting the details of standards support for middleware used in CHAIN regions and providing a roadmap for alignment with EGI. Communication is ongoing to deliver these milestones in preparation for or within the CHAIN workshop to be held at the EGI Technical Forum 2012 in September.

Technical

After initial advertisement of collaboration, CHAIN provided roadmap for interoperation and integration aligned with the EGI Model, while EGI.eu provided report about the identification of

research groups that are part of EGI VRCs and active in CHAIN's regions of interest. Following this, CHAIN delivered a roadmap to improve the integration of operational tools supported by EGI that are used in the different Regional Grid Infrastructures represented in CHAIN and report on dissemination activities including the list of publications issued by CHAIN that benefited from the usage of EGI. CHAIN managed to provide two joint sessions, one at EGI Technical Forum in Lyon and another one at EGI Community Forum in Munich. Finally CHAIN prepared gap analysis on existing issues and other barriers that prevent the adoption of open standards identified in the EGI Standards Roadmap and report on identification of new and emerging NGIs that could interoperate with EGI, NGI guidelines documentation and reuse of EGI documentation in new/emerging NGIs.

Strategic

A CHAIN workshop was held in Amsterdam in January 2012 to discuss CHAIN integration roadmap and interoperations issues⁴. One of topics of discussion was the facilitation of the integration of emerging infrastructures into EGI, and the implications on tools were discussed. CHAIN regularly participated at EGI community events, and is facilitating the consolidation of sustainable grid infrastructures capable of integrating with EGI services.

The CHAIN collaboration facilitated the establishment of a MoU with the South African Grid Initiative, which was signed in September 2011 during TF12⁵. SAGrid is currently under integration⁶.

4.2. DECIDE

MoU Partners	EGI-InSPIRE	DECIDE – Diagnostic Enhancement of Confidence by an International Distributed Environment
MoU Type	Project	
Start date	06/07/2011	
End date		
Partner contact	DECIDE: Fulvio Galeazzi, fulvio.galeazzi@garr.it	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-decide	

Motivation for the MoU

The DECIDE project aims to establish a dedicated grid e-infrastructure for extracting diagnostic markers from medical images. This will be used for Alzheimer's disease and schizophrenia. Medical specialists will be able to access large distributed reference databases (850 and 2200 datasets from normal subjects and from neurological subjects, respectively), high computation and storage resources (more than 1000 CPU core processors and 70 terabyte of storage) and use intensive image processing tools. In the longer-term, the infrastructure could be extended to other research and

⁴ <http://agenda.ct.infn.it/conferenceDisplay.py?confId=701>

⁵ <https://documents.egi.eu/public/ShowDocument?docid=495>

⁶ <http://www.sagrid.ac.za/>

diagnostic algorithms for brain and other organ diseases. Through the MoU, EGI-InSPIRE and the DECIDE project work together to provide European scientists and international collaborations with sustainable distributed computing services to support their work. In this broad context, the specific goals of the collaboration are:

- Requirements gathering
- Support tools and services
- User support and Virtual Research Community integration
- User community policy and procedures
- Sustainability
- Dissemination

Assessment

Managerial

The majority of milestones of this MoU have been completed in addition to inclusion of DECIDE within the EGI case studies though not a specific milestone. Activities had originally stalled, but a phone conference held at the beginning of December 2011 between the two projects to discuss a number of open milestones ensuring a numerous actions and exchanges of information provided further below. There are currently two unresolved milestones:

- Help desk integration – which has not happened due to being a current low priority of the project.
- Organise joint activity at EGI Community Forum 2012 - no session was organised but will be held at the EGI Technical Forum 2012 instead.

Technical

Following the conference call held, DECIDE provided an initial list of applications and services needed and offered, which included several requirements. EGI captured requirements from the DECIDE document: “D7.7.3 - Description of Data Collection Requirements, Application Integration & Scientific Gateway”: Transparent replication of data; Synchronised operations on data and metadata; Coherent roles between science gateways and e-infrastructure; Single Sign On for End User. Each has been recorded in the EGI requirements tracker in dedicated tickets. These tickets have been sent to DECIDE for confirmation of the validity and completeness of the information.

Some of the services offered by DECIDE include:

- Technology that helps communities integrate (distributed) databases into EGI (software, documentations, tutorials, user support).
- Components, tutorials and support to those who wish to develop domain specific, custom portals to interact with EGI services.
- (Portal) component to help data anonymisation and authenticated access to anonymised data.
- Component to interface a portal with robot certificates and/or federated identity infrastructures.
- Applications as services to analyse Alzheimer disease and schizophrenia.

DECIDE shared its formal document that sets out strategies and next steps for the sustainability of the DECIDE e-Infrastructure and service beyond the project lifespan. As EGI final its plans, discussions will continue around specific opportunities that each presents.

Strategic

DECIDE have established, strategic partnership with a number of NGIs/sites (mainly from Italy). These sites provide and develop the community-specific services to DECIDE, some of which – through DECIDE have been made visible to the larger EGI collaboration primarily through the Applications Database (applications, portal gateways). The future of these services depends on bi-lateral agreements made between the DECIDE consortium and the NGIs/sites for the long term. EGI may be able to facilitate this, but until up to now no request about this has been received. The portals provided by DECIDE are specific, unlikely to attract a large number of users. The components that these portals use are more generic, and their reusability will be assessed (alongside with other portal technologies) in the currently running ‘EGI Science Gateway Primer’ Virtual Team.

4.3. EDGI

MoU Partners	EGI-InSPIRE	European Desktop Grid Initiative (EDGI)
MoU Type	Project	
Start date	22/11/2011	
End date	31/05/2012	
Partner contact	EDGI: Agnes Szeberenyi (szeberenyi@sztaki.hu)	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-edgi	

Motivation for the MoU

The specific goals of the collaborations are:

- Effort to integrate Desktop Grids into EGI's monitoring and accounting activities for a seamless operation of Desktop Grids.
- Prototype, test and roll to production the devised solution (in collaboration with the Hungarian NGI) and to support the provided integration software.
- Once ready for production, to disseminate the integration solution through the existing appropriate channels (operations meetings, community meetings etc.).

Assessment

Managerial

So far, progress on milestones is good. Six milestones were delivered. At the time of reporting, only one milestone is late. This is related to the integration with the EGI accounting system, which is work in progress.

Technical

After initial advertisement of collaboration, EDGI started with development of integrated monitoring prototype and collecting requirements (including ARC, gLite, UNICORE).

Strategic

EDGI desktop grid software integration into EGI is progressing well. During PY2 desktop grid services were integrated into the EGI service repository (GOCDDB) and desktop grid probes – developed by EDGI – will be distributed with SAM. SAM Update 17 expected during 2012 will include those probes into the package. Accounting integration is still in progress.

The EDGI project was invited to participate to the March OMB meeting, which took place during CF12 and various topics were discussed, such as support of opportunistic usage of resources through desktop grids.

4.4. e·nventory

MoU Partners	EGI.eu	e.nventory
MoU Type	Project	
Start date	23/12/2011	
End date	31/12/2014	
Partner contact	e·nventory: Nikos Vogiatzis, n.vogiatzis@enventory.eu	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-e.nventory	

Motivation for the MoU

The specific goals of the collaborations are to:

- Share current and historical data related to NGIs' Key Performance Indicators (KPIs), to the extent that such data exists and/or is accessible by the Parties, in order to represent the Grid development and deployment progress at national level across EU and beyond.
- Exchange ideas, discuss, and potentially suggest additional European Grid KPIs in order to represent the Grid development and deployment progress and/or impact of such progress, at a Pan-European level and beyond.
- Assess and provide feedback on the functionality, user-friendliness and long-term sustainability of the European e-Infrastructures Observatory currently in development in order to identify mutually beneficial synergies between the Parties.
- Establish joint dissemination activities to increase awareness and promote the results of the collaboration.

Assessment

Managerial

So far, the progress on milestones is very good. The contacts have regular meeting and also they established a list of action points to facilitate implementation of milestones and strengthen the cooperation. In less than half a year of signing the MoU, 10 milestones successfully met.

At the time of reporting, no milestones are late and no blocking issues are detected.

Technical

After the initial advertisement of collaboration, e-nventory provided a structured document for desired information related to NGI KPIs and access to the restricted section of the e-Infrastructures Observatory. EGI.eu provided available data for the selected NGIs' KPIs and an assessment of the European e-Infrastructures Observatory. Following an extensive data "curation" in the data received e-nventory populated the European e-Infrastructures Observatory with the NGIs' KPIs, referencing EGI.eu as data source and EGI.eu assessed and provided feedback on the developed tools and the representation of NGIs' KPIs. After an initial meeting to brainstorm potential visualisations at Pan-European level, e-nventory provided a structured document for desired information related to EGI KPIs, which was populated by EGI.eu. Finally, e-nventory populated the European e-Infrastructures Observatory with the data.

Strategic

Various NGI status indicators were defined in collaboration with e-nventory to track the evolution of grid infrastructures across Europe in terms of resources contributed and funding levels. Substantial feedback was also generated on possible improvements in the data collection mechanisms, as well as on new or revised indicators for which the collection of data may be important.

The European e-Infrastructures Observatory provides interesting visualisation capabilities of those indicators allowing their correlation with data from other pan-European infrastructures. It allows for:

- Access to an advanced set of monitoring, dissemination and collaboration tools. This includes geographical mappings, graphs (bar/line/bubble), scatter plots, hierarchically-structured representations, timelines of e-Infrastructures success stories, time series trends service, enabling the identification of the countries that have improved or are still at an early stage in terms of Grid and other blocks of e-Infrastructures over the past 10 years.
- Access to eagle-eye overviews of National Grid Infrastructures (NGIs) currently established and active all over Europe; global e-Infrastructures organisations, interconnections of the grid and global scientific communities.
- Access to specific e-Infrastructures intelligence (developments and trends) through resources monitoring and infrastructure status quo.
- Easier/quicker identification of e-Infrastructures organisations in Europe and beyond, which possess particular competences of interest.

Such a facility can be of great interest and value to EGI.eu and its stakeholders, serving as a yardstick tool for tracking and detecting trends, progress monitoring, analysis and evaluation of Grid and other e-Infrastructures across the European Union and beyond. EGI's role and contribution can be properly leveraged and disseminated by such a proper monitoring framework of the respective grid developments at National and Pan-European level.

In addition, data was gathered from the early start of grid projects in Europe to document the growth of the infrastructure in terms of number of resource centres integrated and the amount of compute and storage resources provided.

4.5. ERINA+

Partners	EGI.eu	ERINA+
Agreement Type	Informal Collaboration with a Support Project	
Start date	01/02/2011	
End date	30/06/2013	
Partner contact	ERINA+: Andrea Manieri, andrea.manieri@eng.it	
Report date	May 2012	

Motivation for the Collaboration

ERINA+ evaluates the impact of e-Infrastructure funded projects through the deployment of an effective socio-economic methodology and has proposed a pro-active self-assessment methodology. The main goals of the collaborations are:

- Information exchange regarding the information on methodology for e-Infrastructure impact assessment and survey
- ERINA+ participation in EGI community events
- EGI participation in the ERINA+ self-assessment survey
- Increase visibility through dissemination activities

Assessment

Managerial

Over the last year, cooperation has been good, focusing activities on the major input and outputs to reach project objectives. As described below, the main work has been around providing the ERINA+ methodology and self-assessment survey and participation at EGI major events.

Technical

Visibility of the collaboration is given on both project's website. In terms of the collaboration, ERINA+ has participated with workshops in 3 of EGI's major events (UF'11; TF'11; CF'12). The first workshop allowed the project to present its goals and objectives, which led to the initial feedback from an e-Infrastructure, not only from EGI.eu, but the wider community as well. Following the conference, EGI provided further consultation to the scope and direction of the survey through dedicated phone conferences and with a pre-survey trial. In June 2012, EGI completed the finalised self-assessment web-based tool.

Strategic

Measuring the impact of e-Infrastructures is essential if the ultimate value of the innovation and technology is to be demonstrated, both to new users and funding agencies. Having an opportunity to provide direct feedback into the methodology and final product has been beneficial to both EGI and the ERINA+ project.

4.6. E-ScienceTalk

MoU Partners	EGI-InSPIRE	eScienceTalk
MoU Type	Project	
Start date	23/06/2011	
End date	31/05/2013	
Partner contact	eScienceTalk: Catherine Gater, catherine.gater@egi.eu	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-esciencetalk	

Motivation for the MoU

e-ScienceTalk brings the success stories of Europe's e-Infrastructure to a wider audience. The project coordinates the dissemination outputs of EGI and other European e-Infrastructure projects, ensuring their results and influence are reported in print and online. Through the MoU, e-ScienceTalk works with EGI to expand the scope of the existing outputs, and to report on the interactions of grids with e-infrastructures such as cloud computing and supercomputing.

Assessment

Managerial

This MoU is not focused so much on specific milestones, but the work around creating them. Currently one document has been produced, according to the timeline of milestones, which outlines the various activities having taken place (<https://documents.egi.eu/document/931>). There are no late milestones. The work carried out and the results achieved are summarised below.

Technical

The MoU between e-ScienceTalk and EGI was signed on 23 June 2011 and announced through the EGI website, newsfeed and blog, and also on the GridCast blog. The projects have worked together in a number of areas, concentrating mainly on events, publications and press:

- Joint booth at the eChallenges in Florence in October 2011, ISGC'12 in February in Taipei, ICRI'12 March in Copenhagen and Healthgrid'12 in Amsterdam.
- Contributions to the booths at SC11 in Seattle, the EGI Technical Forum in Lyon in September and the EGI Community Forum in Munich in March. This included provided printed and electronic materials, such as a demonstration of the Real Time Monitor, which shows real time activity on the grid overlaid on a 3D globe.

- e-ScienceTalk and the weekly publication iSGTW acted as media sponsors for the EGI Technical and Community Forums, which included announcing and covering the event in iSGTW and running a GridCast blog which included bloggers from both EGI and e-ScienceTalk, and also Sysfera, SZTAKI, SAGrid, Nikhef and CSIC. During the Technical Forum, there were 250 Tweets from 27 people, 20 photos on Flickr, 27 blog posts on GridCast, including 9 videos. The videos included an interview with Dominique Boutigny, the Director of the CC-IN2P3 (CNRS), the meeting hosts. Members of the EGI team have been active bloggers on the GridCast website at events throughout the year. At the Community Forum, the #cf2012 tag was mentioned in 403 Twitter posts, 221 photographs were uploaded to Flickr and there were 31 blog posts including 14 videos.
- EGI and e-ScienceTalk worked together the e-ScienceBriefings, which are engaging documents aimed at policy makers. E-ScienceTalk consulted with EGI on e-ScienceBriefing 18 in June on grid computing in the Asia Pacific region and briefing 19 on desktop grids. This document was launched at the EGI Technical Forum in Lyon, and distributed in print and by email to EGI mailing lists.
- An EGI case study on research into dinosaur movement was published in iSGTW and 8 other articles were also published. In total, there have been 321 mentions of EGI in iSGTW, including mentions in 52 feature items. These articles featured contributions from the management, dissemination and policy teams, and have been distributed to the 8000 subscribers to iSGTW and reposted through Twitter, Facebook and other social media channels.

Strategic

In the second year of e-ScienceTalk, the impact of activities has been in areas of policy, websites, online publications and social media. Three policy briefings have been published about desktop grids, global connectivity and visualisations in science and distributed at high impact events such as eChallenges, ICRI'12 and e-Science2011. The e-ScienceCity website was launched, including new areas about cloud computing and volunteer computing, together with an associated 3D virtual world which is seeing an increasing level of traffic. Subscribers for iSGTW have grown to 8000, with 3000 followers on social media. A dedicated iSGTW editor now reports from the Asia Pacific region, and articles have featured interviews with Nobel prize winner Brian P. Schmidt, former UK prime minister Gordon Brown and web pioneer Tim Berners-Lee, and have been picked up by publications such as *Symmetry*, *Discovery News* and *Wired US*, which has 1.4 million Twitter followers. GridGuide has expanded by 25 sites in Europe, the US, Africa and Asia. GridCast has reported from more than a dozen events worldwide and GridCast videos have been viewed nearly 200,000 times in YouTube. The Real Time Monitor now includes jobs from ATLAS, one of the world's largest users of the grid, and shows router traffic on the network layer.

The impact of the collaboration between e-ScienceTalk and EGI has led to a high level of visibility of EGI on e-ScienceTalk channels. For example there have been 321 mentions of EGI in iSGTW, including 52 feature items. These have been distributed to readers in 190 countries around the world, and picked up by mainstream media such as *Wired*. E-ScienceTalk has made a significant contribution to the impact of EGI events and events attended by EGI, supporting the events through

a media sponsorship that includes providing printed materials for the booths, publicising the event to increase attendance and providing a blogging outlet through GridCast, including video content. The EGI videos have also been advertised to the 100 followers of the e-ScienceTalk YouTube channel. In future, e-ScienceTalk will continue to support EGI events through its media partnership, publish articles about EGI in its high circulation online publication and to feature EGI materials and content across its various blogs, websites, publications and events.

4.7. GISELA

MoU Partners	EGI.eu	Grid Initiatives for e-Science virtual communities in Europe and Latin America (GISELA)
MoU Type	Project	
Start date	11/04/2011	
End date	31/08/2012	
Partner contact	GISELA: Philippe Gavillet, philippe.gavillet@cern.ch	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-gisela	

Motivation for the MoU

EGI and GISELA work together to enable the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work. Specifically, this is done through:

- Coordinating access to support materials and applications databases.
- The development and implementation of software necessary to integrate OurGrid middleware with the monitoring, accounting and tool infrastructure of EGI.
- Promoting communication and collaboration between VRCs affiliated with EGI and GISELA.

Assessment

Managerial

This MoU has progressed well in terms of community engagement as the majority of milestones and activities completed have been around sessions, workshops and presentations at EGI major events. Technical activities have been the main delayed activities, however, there are no major issues to report as many are due to either initially perceived timeline inconsistencies or project specific schedules. All milestones are expected to be completed during the next year.

Technical

After having announced the start of the collaboration in the EGI.eu and GISELA websites, the main milestones achieved are sessions and presentations at the EGI User Forum 2011, Technical Forum 2011 and User Forum 2012. Links to sessions and presentations are available on the milestone page

above. Regarding the integration of OurGrid with EGI, there is an operational bridge that is able to direct jobs from OurGrid systems to gLite systems, and vice-versa. There is a CREAM CE that is used to submit gLite jobs to the OurGrid system, and an OurGrid peer that receives OurGrid jobs and redirects them through the bridge to gLite CEs. Currently, the desktop grid VO is supported as part of the cooperation with the DEGISCO project. GISELA has also deployed accounting⁷ and monitoring⁸ tools for OurGrid systems. After some discussion on how to integrate these tools with those used in gLite installations, GISELA came to a conclusion that it does not make much sense to have them integrated. This is due to the very different nature of opportunistic and peer-to-peer grids, compared to service grids.

Strategic

GISELA continued to engage with EGI and are active participants at the Forums. Their sessions are well attended and the project leaders interact with other sessions particularly those relating to community and outreach.

4.8. gSLM

MoU Partners	EGI.eu	Grid Service Level Management (gSLM)
MoU Type	Other projects	
Start date	20/06/2011	
End date	30/04/2012	
Partner contact	gSLM: Tomasz Szepieniec, t.szepieniec@cyfronet.pl	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-gslm	

Motivation for the MoU

gSLM and EGI.eu will work together to enable the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work. In this broad context, the specific goals of the collaborations are to:

- Explore the alignment of Service Level Management (SLM) within EGI to the best practice adopted in the IT industry including relationships with customers (VOs, users) and relationships with resource infrastructure as well as technology providers.
- Analyse the current EGI service delivery in the light of best practices.
- Consult NGIs on the implementation of SLM and to provide training and tutorials at EGI events on IT Service Management.
- Connect the EGI community with the ITSM community and disseminate the results of this collaboration within the remit of each project's dissemination.

⁷ <http://charts.ourgrid.org>

⁸ <http://status.ourgrid.org>

Assessment

Managerial

This agreement has proven to be fruitful with high participation from both parties. So far, progress on specific milestones is relatively slow with only 50% of the due milestones delivered (5 out of 10). However, a variety of activities were performed that did not correlate to specific milestones, but were very beneficial and were made possible by having had a formalised relationship. Some of these comprise a detailed review and content contributions to the ‘Evolving EGI Business Model’ report as well as a face-to-face meeting to help shape the definition of EGI’s service portfolio. Further information regarding activities is provided below.

Technical

The gSLM project contributed tutorial activities in both EGI Technical Forum and Community Forum in the area of IT service management, assessing SLM maturity, ISO Management of quality, services and information security according to ISO 9000, ISO/IEC 20000 & ISO/IEC 27000 - Overview and practical insights. The project also provided support in the review of the EGI-InSPIRE deliverable D2.18 “Evolving the EGI business model” and consultancy in the revision of the SLA/OLA in the context of ITSM best practices.

The main milestones achieved are:

- gSLM to submit a proposal for tutorial at the EGI Technical Forum 2011.
- Report proposing alignments of EGI terminology as in use within ITS.
- Input collection from VO Managers based on gSLM User Survey and report analysing results of survey.
- Short report on the outcome of the training session.
- Report on dissemination activities.

Strategic

The gSLM project helped in increasing the awareness of ITIL best practices in the EGI community, supported the alignment of the EGI glossary to the ITIL terms, provided key inputs in the business model discussion and alignment of the EGI SLA structure with IT service management best practices.

4.9. MAPPER

MoU Partners	EGI-InSPIRE	MAPPER - Multiscale Applications on European e-Infrastructures
MoU Type	Project	
Start date	01/08/2011	
End date		
Partner contact	MAPPER: Alma Erenstein, A.M.Erenstein@uva.nl	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-mapper	

Motivation for the MoU

MAPPER deploys a computational science environment for distributed multi-scale computing on and across European e-Infrastructures by adding and extending core middleware capabilities and offering a set of additional application tools. MAPPER is driven by seven exemplar applications from five user communities (virtual physiological human, computational biology, fusion, hydrological engineering, nano material science), which will lead to developing a generic solution for distributed multiscale computing.

This collaboration contributes to enabling the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work. The specific goals of the collaborations are to:

- Gather Requirements.
- Provide Support Tools and Services.
- Contribute, steer and advance high-priority standards.
- Work towards establishing Virtual Research Communities (VRCs).
- Collaborate on sustainability issues, dissemination and training.
- Understand and develop policies around HTC and HPC.

Assessment

Managerial

The collaboration is successfully progressing. It has organised two task forces, the first of which focused on the analysis of the state of the art of the MAPPER software platform and of the user requirements, and the second aiming for the integration of the MAPPER platform into EGI.

Technical

The QosCosGrid middleware (requested by the MAPPER collaboration) was integrated into the monitoring infrastructure. QosCosGrid Nagios probes will be officially part of SAM Update 17 expected in July 2012. QosCosGrid software types were added to GOCDB so that new service endpoints can be declared as part of the production infrastructure. Accounting integration is expected at the end of 2012. QosCosGrid is already run as production platform in PL-Grid.

A number of other milestones have been completed:

- Start of collaboration advertised.
- EGI-InSPIRE provided feedback to MAPPER on the status of the supplied requirements.
- EGI provided monitoring infrastructure needed to check status of deployed services with MAPPER delivering EGI compatible monitoring connectors.
- EGI provided a list of candidates interested in running/supporting MAPPER middleware extensions & application tools.
- EGI provided access to GOCDB for info on resource centres/services accessible to MAPPER.
- EGI promoted and attended the 1st MAPPER Seasonal Training School.
- A number of MAPPER deliverables made available:
 - D5.2 Vertical integration plan
 - D4.1 Review on applications, users, software and e-Infrastructures

- D3.1 Policy framework resource providers need
- D6.3 Support Process Definition
- D3.2 Standardisation roadmap & 1st sustainability plan

Strategic

The support of user communities requiring the coupled usage of HTC and HPC resources for multi-scale tightly and loosely coupled simulation is being used a driver as EGI-PRACE integration plans. Thanks to this collaboration a series of EGI-PRACE workshop have been organising aiming at defining the technical integration of a subset of the EGI operational tools.

4.10. ScalaLife

MoU Partners	EGI-InSPIRE	ScalaLife - Scalable Software Services for Life Science
MoU Type	Project	
Start date	01/09/2011	
End date	30/08/2013	
Partner contact	ScalaLife: Erwin Laure, erwinl@pdc.kth.se	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-scalalife	

Motivation for the MoU

The purpose of the present document is to give a brief summary of the collaboration to date between the projects EGI-InSPIRE and ScalaLife. In September 2011, the two projects signed a MoU to define a framework for long-term collaboration, recognising the mutual benefits a wide cooperation will bring to both projects. The common goal of both projects is the provision of a sustainable service for distributed computing to the European scientific community and its international collaborators. The specific lines of cooperative activity are:

- Integration of Virtual Research Communities (VRCs) and
- Dissemination.

The purpose of the integration activity is to explore the use of the ScalaLife Competence Centre (CC) within the VRC model proposed by EGI, define the mechanism for engaging and interfacing with the Life-Science Grid Computing (LSGC) VRC and, through the injection of requirements from High Performance Computing (HPC) for Life Sciences (LS) into EGI, influence the evolution of the infrastructure, support services and procedures.

The goal of the dissemination activity is to coordinate and streamline common dissemination between the two projects, thus maximising its impact and influence.

Assessment

Managerial

This MoU is progressing as scheduled with all of milestones having been completed. A detailed overview of the activities that have been carried out are described below.

Technical

The first achievement of the collaboration between EGI-InSPIRE and ScalaLife was the announcement of the common agreement made early by both parties on their respective websites. This was done as planned using dedicated static pages as well as a press release.

During the last 9 months, the ScalaLife project has invested considerable efforts into the creation of a CC for the LS, designed to evolve into a self-sustainable resource that will act as a “one-stop-shop” for both users and developers of simulation software in the LS. The CC is in a mature state and has a wealth of training material, with an emphasis on the HPC aspects of the LS software, which constitutes an added value from the project. Starting with an initial core of three simulation codes the ScalaLife project supports directly, the CC covers a growing number of applications. These are gradually added to the CC knowledge base as projects join the collaborative efforts of ScalaLife towards a self-sustainable service. All the training material available from the CC is public and is consequently available to the EGI VRCs too.

The development of training material in ScalaLife has been enhanced using EGI expertise, resulting in tutorials on the use of GROMACS (one of the LS applications supported by ScalaLife) on Grid resources. The material was provided by WeNMR, a project and associated VRC supported by EGI. The availability of this material is the first step towards the planned connection of the LS communities that ScalaLife supports to the EGI user communities that work in the same disciplines.

The ScalaLife CC is advertised by both the EGI and EGI-InSPIRE websites but aside from this, of notable importance are two publications in the EGI community forums (References 1 and 2). These publications explain the role and strategy of the ScalaLife CC and thus support a good dissemination outside the range normally covered by the ScalaLife project and its website. Yet another publication worth mentioning is a feature article in “International Science Grid This Week” (Reference 3).

Finally, as part of the dissemination efforts, ScalaLife has participated in the organisation of a joint activity at the EGI Community Forum 2012 held at LRZ, Munich, between the 26th and 30th of March. As a future activity, ScalaLife will also participate in the organisation of the EGI Technical Forum in Prague, 16 September 2012.

Strategic

The collaboration between the two projects has started well and is evolving between the parameters set by the MoU. The milestones of the MoU have been completed, and a second round of training material from ScalaLife is expected to become available online at the end of August 2012. The impact of these is hard to judge, because ScalaLife provides services that are

1. Life science specific, thus are relevant to a subset of EGI users
2. Support the porting and use of a set of applications on HPC systems that are not integrated with EGI. ScalaLife therefore provides alternative rather than supplementary services to EGI.

At the beginning of the collaboration UCST assessed the use of the same applications in EGI that ScalaLife supports (GROMACS, DALTON), and informed the users of these applications that support for these by ScalaLife on HPC systems is available. No interest was found.

The collaboration could be continued to a different direction: The partners could setup and operate application portal(s) for GROMACS and DALTON using science gateway technologies from EGI and applications and back-end and resources from ScalaLife.

4.11. SCI-BUS

MoU Partners	EGI-InSPIRE	SCI-BUS - Scientific gateway Based User Support
MoU Type	Project	
Start date	29/03/2012	
End date	30/09/2014	
Partner contact	SCI-BUS: Agnes Szeberenyi, szeberenyi@sztaki.hu	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-SCI-BUS	

Motivation for the MoU

The collaboration aims to integrate Virtual Research Communities and coordinate communication efforts to maximise impact. In this broad context, the specific goals of the collaborations are:

- VRC Integration: The collaboration will explore new possibilities for EGI user communities to create custom science gateways via the SCI-BUS Competence Center. SCI-BUS will develop and integrate an availability monitoring service for the SCI-BUS Generic Gateway, based on the EGI monitoring infrastructure.
- Dissemination: The MoU gives SCI-BUS an outlet for its training materials, application details and other information via EGI's User Support services (e.g. Training Marketplace, Applications Database).

Assessment

Managerial

Project has just started. One milestone has been delivered.

At the time of reporting, there are no late milestones, and no major blocking issue are detected.

Technical

Since the MoU has been signed recently, the EGI-InSPIRE and SCI-BUS manage to advertise the start of the collaboration through their websites.

Strategic

The joint work with SCI-BUS started at the end of March, and so far there were no technical milestones. Joint work towards the MoU milestones is progressing, with activities in a recently started Virtual Team (Science gateway primer) and with a planned joint workshop at the technical forum. The success of M1.1 (Sep 2012 - Complete the development and integration work for availability monitoring of the SCI-BUS Generic Gateway technology) will largely depend on the Monitoring framework development activities in EGI-InSPIRE JRA1-SA1. The release of the

monitoring infrastructure that could support the monitoring of community services in EGI has been already delayed several times.

4.12. SHIWA

MoU Partners	EGI-InSPIRE	SHaring Interoperable Workflows for large-scale scientific simulations on Available DCIs (SHIWA)
MoU Type	Project	
Start date	22/11/2011	
End date	31/05/2012	
Partner contact	SHIWA: Agnes Szeberenyi, szeberenyi@sztaki.hu	
Report date	May 2012	
Milestones	http://go.egi.eu/mou-milestones-shiwa	

Motivation for the MoU

The specific goals of the collaborations are:

- VRC Integration
- Dissemination

Assessment

Managerial

Overall, this agreement progressed according to schedule with all milestones having been delivered.

Technical

After initial advertisement of collaboration, EGI-InSPIRE and SHIWA exchange information on active and potential communities to extend EGI communities and SHIWA workflow communities and exchange of training materials, applications, documentation between EGI and SHIWA support services and team. Development and deployment of availability monitoring for SHIWA Repository was done by SHIWA. EGI-InSPIRE and SHIWA organised joint topical workshop on e Science Workflows in Budapest, as well as joint session at EGI Community Forum in Munich.

Strategic

The joint work with SHIWA progressed according to the plans laid out in the MoU. The strong presence of SHIWA at EGI TF and CF, and the joint workshop on E-Science Workflows that EGI.eu jointly organised with SHIWA in February 2012 helped us to complete all, but one milestones. The SHIWA workflow repository is now linked to the EGI website (go.egi.eu/workflows) but it is still not connected to the EGI monitoring system. The reason is that SHIWA did not have effort to complete this task. As an extra collaboration not covered by the MoU SHIWA plans to develop a web gadget for this that could facilitate its uptake even further. (This depends on whether SHIWA can allocate someone for this.)

The SHIWA project has been recently extended until the end of the summer, so the last milestone (report) will be completed later than was planned originally.

4.13. SIENA

MoU Partners	EGI-InSPIRE	SIENA - Standards and Interoperability for e-Infrastructure Implementation Initiative
MoU Type	Project	
Start date	22/09/2011	
End date	30/06/2012	
Partner contact	SIENA: Nick Ferguson, n.ferguson@trust-itservices.com	
Report date	May 2012	
Milestone	http://go.egi.eu/mou-milestones-siena	

Motivation for the MoU

SIENA contributes to defining a future e-Infrastructures roadmap focusing on interoperability and standards, in close collaboration with the European Commission, Distributed Computing Infrastructures (DCI) projects and Standard Development Organisations (SDOs), to gain an in-depth understanding of how distributed computing technology is being developed in this context. The roadmap will define scenarios, identify trends, investigate the innovation and impact sparked by cloud and grid computing, and deliver insight into how standards and the policy framework is defining and shaping current and future development and deployment in Europe and globally.

The MoU contributes to enabling the vision of providing European scientists and international collaboration for sustainable distributed computing services to support their work. In this broad context, the specific goals of the collaborations are to:

- Disseminate the results of this collaboration within the remit of each project's dissemination and communication activities such as joint events.
- Increase visibility of project objectives and community results through leveraging a large network of communities within the standards arena.
- Highlight the exchange ideas and collaboration on common goals through participation in project expert groups and roadmaps.

Assessment

Managerial

Overall this MoU has progressed well with all milestones having been delivered. The collaboration between the two projects started well and evolved between the parameters set by the MoU and beyond. This cooperation has shown mutual benefits and is expected to continue in good circumstances beyond the life of SIENA. No issues or concerns arose to report.

Technical

The majority of collaboration has been through EGI participation in the SIENA Roadmap Editorial Board for production of the SIENA Roadmap and through SIENA involvement with the EGI Federated Cloud Task Force. EGI has also participated heavily in SIENA's annual Cloudscape event, with SIENA holding workshops at EGI major events. This MoU formalised a solid relationship between the two projects.

The milestones achieved are:

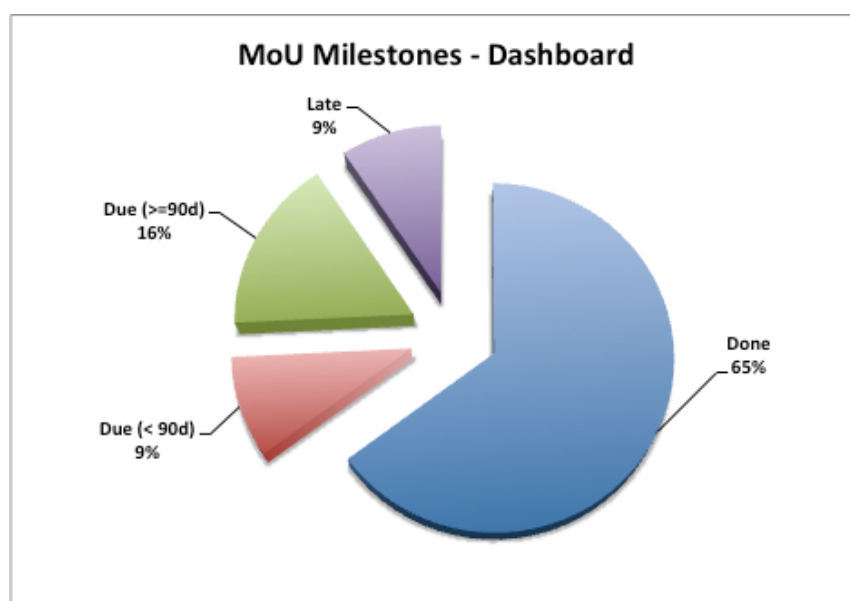
- Published announcement regarding the signed MoU.
- SIENA held Roadmapping workshop at EGI Technical Forum 2011.
- EGI-InSPIRE contributed and provided feedback to SIENA Roadmap.
- SIENA organised a session at EGI Community Forum 2012.
- EGI-InSPIRE members participated in Cloudscape IV.
- Joint work on clouds and standards (documented in brief report).
- Brief report highlighting the major activities undertaken.

Strategic

Overall, this MoU increased the visibility of the two projects and formalised mechanisms for interaction. Through this MoU, the relationship between the two projects was solidified and activities better targeted with achieved results. As the SIENA project is coming to a close, no specific activities are currently planned. However, through the established relationships, as activities emerge future collaborations will be more easily forged.

5. Milestone Dashboard

Partner	Total	Done	Due (< 90d)	Due (>=90d)	Late
BCC	7	2	0	3	2
CHAIN	16	9	1	4	2
DECIDE	9	5	3	0	1
EDGI	7	6	0	2	1
EMI	22	16	1	0	0
e.nventory	16	10	1	3	2
e-ScienceTalk	4	2	0	2	0
GISELA	12	9	3	0	0
gSLM	13	5	3	0	5
HMRC	8	1	1	1	5
IGE	14	11	0	3	0
LSGC	12	10	0	2	0
MAPPER	21	11	1	6	3
Meraka	6	2	1	2	1
UFRJ	4	2	2	0	0
SAGA	14	7	1	4	2
ScalaLife	9	7	0	2	0
SCI-BUS	13	1	5	7	0
SHIWA	7	6	1	0	0
SIENA	7	7	0	0	0
StratusLab	18	18	0	0	0
WeNMR	15	15	0	0	0
WLCG	7	5	1	1	0
Total	261	167	25	42	24



*For the latest up-to-date information visit: <http://go.egi.eu/mou-dashboard>

6. MoUs for 2012

Partner 1	Partner 2	Partner 2 Contact	MoU Type	Status
EGI.eu	UVACSE (Genesis)	Andrew Grimshaw	TP	Awaiting Sig.
EGI.eu	DANTE	Roberto Sabatino	Org.	Draft
EGI.eu	Digital Cultural Heritage (DCH)	Antonella Fresa	LoI/VRC	Draft
EGI.eu	COMPChem (temporary name)	Antonio Lagana	VRC/UC	Planned
EGI.eu	Astrophysics/Astronomy	Claudio Vuerli	VRC/UC	Planned
EGI.eu	Square Kilometre Array (ESFRI)		UC	Planned
EGI.eu	Cherenkov Telescope Array (ESFRI)		UC	Planned
EGI.eu	GAIA	Nic Walton	UC	Planned
EGI.eu	European Incoherent Scatter (EISCAT)	Esa Turunen	UC	Planned

TP: Technology Provider

Org.: Organisation

LoI: Letter of Intent

VRC: Virtual Research Community

UC: User Community

7. Conclusions

This report has provided the opportunity to evaluate each of the signed agreements and analyse the impact. As shown, the majority of MoUs are progressing well with only a few issues arising. Since the beginning of EGI-InSPIRE, the EGI.eu Strategy and Policy Team has strived to consistently improve the procedures of both establishing MoUs and tracking the defined milestones.

Some of the lessons learnt led to improvements being made in order to make the MoU framework more efficient. For example, it proved to be difficult maintaining specifically designed templates per MoU type (e.g. TP, RP, VRC, project) as each MoU that was established presented various changes that needed to be made, some individually, some affecting all MoU types. Therefore, the SPT combined the MoU template into a single version that allows everyone to quickly identify the latest master version ensuring each change is reflected in any future agreement. Another was around the Requirements Tracker tool, originally used to track milestones, proved not to be the best solution as it was labour intensive and inflexible. Recently, MoU milestones have been migrated to a Google Spreadsheet that has allowed for the creation of visual dashboard for late and upcoming milestones, individual MoU links and easier insertion and updating of completed milestones. Finally, milestone delivery dates are sometimes difficult to accurately define as timelines shift according to individual project or organisational progress and unforeseen delays, which can differ from the original plans at the time of signing the MoU. It is understood that there needs to be a balance between rigidity to ensure specific activities are carried out with the flexibility in responding to unforeseen changes.

In the more than 20 agreements signed, there have only been a few cases where the activities have not been carried out as originally planned. However, communication between the parties continued in order to understand the blocking issues and how the mutual beneficial objectives could eventually be achieved. For example, activities with South Africa were impaired by a lack of human and IT resources able to be provided by the MoU partners, which were necessary to complete the integration process. However, the interest in completing the certification and integration procedure was reassessed in April 2012 and the MoU partners confirmed their interest in completing it. The HMRC MoU was delayed upon announcement of the MoU from both parties as HMRC representatives shifted priorities to the first year set up of the DRIHMS project. Even though representatives have been active within the EGI major events, they have not yet attended a UCB meeting or have completed any milestones. The project coordinator has communicated their plans to pick back up the activities over the next year starting from the EGI Technical Forum 2012 and to work with the EGI TONC Team. In Latin America, the end of the GISELA support project may impair the continuity of the operational services provided by IGALC. Both operational teams are in close contact and plans are being developed in preparation.

Over the next year, there are several MoUs that are in various stages of development with only 2 of the 23 MoUs having ended (SIENA; StratusLab). Therefore, much work will be around finalising planned MoUs and carrying out the individual activities and tracking the progress of those already established.

Overall, these agreements have proven to allow the individual parties to focus on specific areas of mutual benefit and ensure both technical and strategic impact.